CYCLOSPORIASIS

DISEASE REPORTING

In Washington

New requirements for the reporting of cyclosporiasis were instituted in December of 2000. In the first year of reporting, DOH received 9 case reports.

Water and food (including raspberries and basil) can be contaminated with *Cyclospora*; Washington cases are often exposed during travel.

Purpose of reporting and surveillance

- To identify sources of transmission (e.g., a commercial product) and to prevent further transmission from such sources.
- To better characterize the epidemiology of this organism.

Reporting requirements

- Health care providers: notifiable to Local Health Jurisdiction within 3 work days
- Hospitals: notifiable to Local Health Jurisdiction within 3 work days
- Laboratories: notifiable to Local Health Jurisdiction within 2 work days, specimen submission required
- Local health jurisdictions: notifiable to DOH Communicable Disease Epidemiology within 7 days of case investigation completion or summary information required within 21 days

CASE DEFINITION FOR SURVEILLANCE

Clinical criteria for diagnosis

An illness of variable severity caused by the protozoan *Cyclospora cayetanensis* and commonly characterized by watery diarrhea, loss of appetite, weight loss, abdominal bloating and cramping, increased gas, nausea, fatigue, and low-grade fever. Vomiting also may be noted. Relapses and asymptomatic infections can occur.

Laboratory criteria for diagnosis

- *Cyclospora* oocysts in stool by microscopic examination, or
- In intestinal fluid of small bowel biopsy specimens, or
- Demonstration of sporulation, or
- *Cyclospora* DNA (by polymerase chain reaction [PCR]) in stool, duodenal aspirates or small bowel biopsy specimens.

Case definition

- Probable: a clinically compatible case that is epidemiologically linked to a confirmed case.
- Confirmed: a case that is laboratory confirmed, may be symptomatic or asymptomatic.

Direct person-to-person transmission is unlikely because Cyclospora *oocysts are not infectious at the time of excretion.*

A. DESCRIPTION

1. Identification

This diarrheal disease is caused by a recently identified coccidian protozoa (*Cyclospora cayetanensis*). This clinical syndrome consists of watery diarrhea (6 or more stools/day), nausea, anorexia, abdominal cramping, fatigue and weight loss; fever is rare. The median incubation period is about 1 week. *Cyclospora* can invade the jejunal epithelium and produce enteritis. Diarrhea in the immunocompetent can be prolonged but is self-limited, and lasts 9-43 days according to various reports; mean duration of organism shedding was 23 days in Peruvian children. In the immunocompromised, diarrhea lasted for months in some patients. It has also been associated with prolonged diarrhea in travelers to Asia, the Caribbean, Mexico and Peru.

Diagnosis is made by identification of the 8-9 µm size oocysts, about twice the size of *Cryptosporidium parvum* in wet mount under phase contrast microscopy. A modified acid-fast stain can be used. Organisms fluoresce under ultraviolet illumination.

Transmission appears to be primarily waterborne, and occurs either through drinking or swimming in contaminated water; there have been international outbreaks involving thousands of persons traced to raspberries from Guatemala that occurred in at least 3 successive years during the late 1990s. Other vehicles have included basil and lettuce. Outbreaks have a seasonal pattern, with warmer months predominating in reported cases.

The way in which the produce was contaminated was not determined for any of the outbreaks, in part because methods for detecting *Cyclospora* on produce and in other environmental samples are insensitive to low levels of the parasite. Produce should be washed thoroughly before it is eaten; however, this practice does not eliminate the risk of *Cyclospora*. Health care providers should consider the diagnosis of *Cyclospora* infection in persons with prolonged diarrheal illness and request stool specimens so that specific tests for this parasite can be made.

Cyclosporiasis can be treated with a 7 day course of oral trimethoprim (TMP)-sulfamethoxazole (SMX) (for adults, 160 mg TMP plus 800 mg SMX twice daily; for children, 5 mg/kg TMP plus 25 mg/kg SMX twice daily). In patients who are not treated,

illness can be protracted, with remitting and relapsing symptoms. Treatment regimens for patients who cannot tolerate sulfa drugs have not been identified.